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**OCCUPATIONAL SURVEY REPORT**

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RADIOLOGIC, MEDICAL LABORATORY AND  
NUCLEAR MEDICINE CAREER LADDERS

AFSCs 90330, 90350, 90370, 90390, 90430, 90450,  
90470, 90492, 90930, 90970, AND 90999,

AFPT-90-909-342

11 31 DECEMBER 1978

OCCUPATIONAL SURVEY BRANCH  
USAF OCCUPATIONAL MEASUREMENT CENTER

RANDOLPH AFB TEXAS 78148

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## PREFACE

This report presents the results of a detailed Air Force Occupational Survey of the Radiologic (AFSCs 90330, 90350, 90370, and 90390), Medical Laboratory (AFSCs 90430, 90450, 90470, and 90492), and Nuclear Medicine (AFSCs 90930, 90970, and 90999) career ladders. The project was directed by USAF Program Technical Training, Volume 2, dated October 1977. Authority for conducting occupational surveys is contained in AFR 35-2. Computer outputs from which this report was produced are available for use by operating and training officials.

The survey instrument was developed by Mr. Robert L. Alton, GS-11, Inventory Development Specialist. Captain Frederick B. Bower Jr., Occupational Survey Analyst, analyzed the data and wrote the final report. This report has been reviewed and approved by Lieutenant Colonel Jimmy L. Mitchell, Chief, Airman Career Ladders Analysis Section, Occupational Survey Branch, USAF Occupational Measurement Center, Randolph AFB, Texas, 78148.

Computer programs for analyzing the occupational data were designed by Dr. Raymond E. Christal, Occupational and Manpower Research Division, Air Force Human Resources Laboratory (AFHRL), and were written by the Project Analysis and Programming Branch, Computational Sciences Division, AFHRL.

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This report has been reviewed and is approved.

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## SUMMARY OF RESULTS

1. Survey Coverage: Inventory booklets were administered to personnel in the Radiologic, Medical Laboratory, and Nuclear Medicine specialties (AFSCs 903X0, 904X0, and 909X0) during the period August through November 1978. Survey results are based on responses from 34 percent of AFS 903X0, 24 percent of AFS 904X0, and 45 percent of AFS 909X0 personnel assigned to each respective career ladder.
2. Comparative Job Structure: Four major groupings of jobs and two independent job types were identified within the sample. One group consisted of supervisory personnel from each of the career ladders surveyed. The other major groups were each made up of a single career specialty with personnel performing as either radiologic, medical laboratory, or nuclear medicine personnel. The independent job types consisted of a group of classroom instructors and a group of airmen performing a very small number of general medical laboratory tasks.
3. DAFSC Differences: Jobs performed by members of the Radiologic career ladder were very homogeneous. There is a gradual progression from the performance of technical tasks to the performance of supervisory tasks as airmen advance from the 3- to the 9-skill level. Although a very heterogeneous career ladder, Medical Laboratory personnel also tend to increase their time spent on supervisory duties as they advance in skill level. Seven skill level Nuclear Medicine personnel perform as technicians rather than as managers.
4. AFR 39-1 Evaluation: The current AFR 39-1 specialty descriptions were found to be complete and accurately portrayed the duties and responsibilities of the personnel in each career ladder.
5. Implications: The members in each career ladder were found to be performing jobs separate and distinct from one another; no overlap in technical functions were noted. Overall the survey supports the current classification structure for these career specialties.

OCCUPATIONAL SURVEY REPORT  
RADIOLOGIC, MEDICAL LABORATORY AND NUCLEAR  
MEDICINE CAREER LADDERS  
(AFSCs 90330, 90350, 90370, 90390, 90430, 90450, 90470, 90492,  
90930, 90970, AND 90999)

INTRODUCTION

↘ This is a report of an occupational survey of personnel in the Radiologic, Medical Laboratory, and Nuclear Medicine career ladders completed by the Occupational Survey Branch, USAF Occupational Measurement Center, during December 1978. This report is one of three prepared for the Classification Branch of the Air Force Manpower and Personnel Center (AFMPC/MPCRPO) upon their request for occupational data on selected AFSCs within the Medical career field "to determine if the current classification structure is adequate." In this study, AFS 909X0, Nuclear Medicine Technician was surveyed in conjunction with AFSCs 903X0 and 904X0 since personnel entering the Nuclear Medicine career ladder must first possess at least a 5-skill level in either the Radiologic or Medical Laboratory career ladders. This implies similar skill and knowledge requirements and makes these three specialties logical candidates for possible consolidation. ↙

BACKGROUND

Personnel normally enter the Radiologic career ladder by first attending the J3ABR90330, Radiologic Specialist course at the School of Health Care Sciences, Sheppard AFB, Texas. These personnel may be either "pipeline" students from basic training or retrainees from other specialties. Upon completion of this 14 week course, graduates are awarded the 3-skill level. The graduates are next sent to one of several designated Air Force hospitals where they are immediately entered into course J5AZO90350, Radiologic Specialist (Phase II). After six months of this 38 week course, students may be awarded the 5-skill level. Satisfactory completion of both courses satisfies one year of the two year American Medical Association (AMA) accredited training program for certification as a Radiologic Technologist. The second year of training can be accomplished at any Air Force medical facility with a full time radiologist on its staff. However, many airmen are assigned to medical facilities without a radiologist and consequently, not every airman will receive certification in his first assignment or first enlistment. The primary duties of the personnel in this specialty are to operate X-ray equipment to produce radiographs, assist radiologists or physicians with special radiographic procedures, assist radiotherapists in the treatment of disease by radiotherapy, and to enforce health protective measures to prevent overexposure to X-radiation and/or contamination by radioactive source materials.

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Most Medical Laboratory personnel also enter their career ladder in a similar manner. "Pipeline" airmen from basic training or retrainees first attend the basic J3ABR90430, Medical Laboratory Specialist course at the School of Health Care Sciences. Upon completion of this 17 week course, graduates are awarded the 3-skill level and sent to one of several designated Air Force hospitals where they are entered into the 36 week J5AZO90450, Medical Laboratory Specialist (Phase II) course. After six months of this course students may be awarded the 5-skill level. Upon completion of the course graduates are assigned to medical facilities worldwide. They are primarily responsible for testing and analyzing human and other substances by established laboratory techniques to aid in diagnosis, treatment, and prevention of diseases or in support of medical research.

Nuclear Medicine Technicians enter their career ladder quite differently. As this career ladder is a lateral career specialty, certain prerequisites must first be met. All entrants must be in their second or subsequent enlistment, be in the grade of E-4 or higher, possess either AFSC 90350, or AFSC 90450, and be eligible to retrain under the provisions of AFR 39-4. Training is conducted through the 16 week J5ALN90930, Nuclear Medicine Technician course at the US Naval Medical School, National Naval Medical Center, Bethesda, Maryland. Upon completion of the course, graduates are awarded the 3-skill level and assigned to Air Force medical facilities worldwide that possess authorizations for Nuclear Medicine Technicians. Their primary responsibility is to perform established scientific laboratory techniques utilizing radioactive isotopes to aid in diagnosis, treatment, or prevention of disease, or to support biomedical research.

This report is intended to examine these three medical specialties based on tasks performed by survey respondents in order to determine the most efficient way to classify and manage our valuable medical personnel resources. Topics discussed in this report include: (1) development and administration of the survey instrument; (2) the job structure found within the career ladders and the relationship to skill level groupings; (3) comparison of job structures with AFR 39-1 specialty descriptions; and (4) job satisfaction and related data.

## INVENTORY DEVELOPMENT

The data collection instrument for this occupational survey was USAF Job Inventory AFPT 90-909-342. The inventory was developed by first developing a task listing from jobs performed by AFS 909X0 personnel at Wilford Hall Medical Center, Lackland AFB, Texas. A review of the task list by medical specialists assigned to AFMPC indicated that it was a comprehensive description of Nuclear Medicine tasks. These tasks were then combined with the AFS 904X0 Job Inventory (AFPT 90-904-091) which was administered to the field during the summer of 1978.

The survey instrument from the AFS 903X0 Occupational Survey conducted in 1974 served as the starting point for the development of tasks covering this AFSC. This list was expanded and refined through a thorough research of career ladder publications and directives and personal interviews with subject matter specialists at the School of Health Care Sciences and Wilford Hall Medical Center. These tasks were combined with those for the other two specialties to provide a revised job inventory of 980 tasks grouped under 26 duty headings and a background section that requested information about the respondents such as grade, TAFMS, duty title, and job interest.

### INVENTORY ADMINISTRATION

During the period August through November 1978, consolidated base personnel offices worldwide administered the inventory to job incumbents holding AFSCs of 903X0, 904X0, and 909X0. Job incumbents working in various types of facilities were selected from a computer generated mailing list obtained from personnel data tapes maintained by the Air Force Human Resources Laboratory (AFHRL). Each individual who completed the inventory first completed an identification and biographical information section (background section), and then checked each task performed in their current job.

After checking all tasks performed, each incumbent then rated each of these tasks on a nine-point scale showing relative time spent on that task as compared to all other tasks checked. The ratings ranged from one (very-small-amount time spent) through five (about-average time spent) to nine (very-large-amount time spent). To determine relative time spent for each task checked by a respondent, all of an incumbents ratings are assumed to account for 100 percent of the individuals time spent on the job and are summed. Each task rating is then divided by the total task responses and the quotient multiplied by 100. This procedure now provides a basis for comparing tasks not only in terms of percent members performing but also in terms of the average percent time spent performing any given task.

### SURVEY SAMPLE

Personnel are normally selected to participate in an occupational survey so as to insure a balanced representation across MAJCOM and DAFSC groups. However, in this special study it was evident from discussions with members of AFMPC/MPCRPO that an adequate sample representing all types and sizes of medical facilities was needed. Therefore, survey booklets were mailed to incumbents serving in representative Air Force medical facilities identified by AFMPC/SGEA. Table 1 reflects the distribution of the sample by the type of facility.

Table 2 reflects the percentage distribution, by major command, of assigned personnel in each career ladder as of June 1978. Also reflected is the distribution of incumbents in the final survey sample. Of the 1,101 Radiologic personnel assigned, responses were gathered from 369 or 34 percent of the total ladder. The 383 responses in the final sample gathered from the Medical Laboratory career ladder represent 24 percent of the total population of 1,611 members. Responses were received from 21 Nuclear Medicine Technicians, or 45 percent of that career ladder.

Table 3 reflects the distribution of the survey sample in terms of DAFSC groups. Overall, the sampling distributions indicate that the survey sample is adequately representative of the career ladder population for each of the specialties included in this study.

TABLE 1

MEDICAL FACILITIES REPRESENTED IN SURVEY SAMPLE  
(PERCENT BY AFSC SURVEYED)

<u>MEDICAL FACILITY</u>	<u>903X0</u>	<u>904X0</u>	<u>909X0</u>
USAF CLINIC	8	8	0
USAF HOSPITAL	39	39	10
USAF REGIONAL HOSPITAL	21	23	33
USAF MEDICAL CENTER	22	17	52
OTHER*	<u>10</u>	<u>13</u>	<u>5</u>
TOTAL	100	100	100

\* INCLUDES RESEARCH FACILITIES AND SPECIAL MEDICAL ACTIVITIES



TABLE 2

## COMMAND REPRESENTATION IN THE SURVEY SAMPLE

COMMAND	AFS 903X0		AFS 904X0		AFS 909X0	
	PERCENT OF ASSIGNED	PERCENT OF SAMPLE	PERCENT OF ASSIGNED	PERCENT OF SAMPLE	PERCENT OF ASSIGNED	PERCENT OF SAMPLE
AAC	2	4	2	5	0	0
ADC	2	2	2	2	0	0
AFLC	7	8	5	12	11	14
AFSC	11	8	21	13	30	28
ATC	12	20	13	19	19	19
MAC	15	13	12	9	21	19
PACAF	3	3	5	10	4	5
SAC	21	18	18	8	7	5
TAC	16	15	12	10	0	0
USAF	2	3	1	3	4	5
USAFE	8	5	9	7	4	5
OTHER	1	1	0	2	0	0
TOTAL	100	100	100	100	100	100

	<u>903X0</u>	<u>904X0</u>	<u>909X0</u>
TOTAL ASSIGNED	1,101	1,611	47
TOTAL SAMPLED	369	383	21
PERCENT OF ASSIGNED SAMPLED	34%	34%	45%

TABLE 3

## DAFSC REPRESENTATION OF THE SURVEY SAMPLE

<u>DAFSC</u>	<u>PERCENT OF ASSIGNED</u>	<u>PERCENT OF SAMPLE</u>
90330	1%	4%
90350	80%	71%
90370	17%	22%
90390	2%	3%
90430	2%	5%
90450	80%	71%
90470	17%	21%
90492	1%	3%
90930	47%	19%
90970	47%	71%
90999	6%	10%

## CAREER LADDER STRUCTURE

A key aspect of the occupational survey program is to examine the job structure of career fields or ladders on the basis of what people are actually doing in the field, rather than on the basis of how official career field and ladder documents say they are structured. This analysis of job structure is made possible by the use of the Comprehensive Occupational Data Analysis Programs (CODAP). By using CODAP, job functions are identified on the basis of similarity in tasks performed and relative time spent performing the tasks. Using the job structure as a starting point, it is then possible to first describe the career field or career ladder as it presently exists, and then, in turn, evaluate the pertinent career ladder documents, such as AFR 39-1 Specialty Descriptions and the Specialty Training Standard.

The career ladder structure analysis process consists of determining the functional job structure of career ladder personnel in terms of job types, clusters, and independent job types. A job type is a group of individuals who perform many of the same tasks and also spend similar amounts of time performing them. When there is a substantial degree of similarity between different job types, they are grouped together and labeled as clusters. Finally, there are often cases of specialized job types that are too dissimilar to be grouped into any cluster. These fairly unique groups are labeled independent job types.

The job structure for these career ladders was determined by performing a job type analysis of the 777 survey respondents. This analysis identified four primary job groups or clusters, and two independent job types. With the exception of the supervisory job group, job groups tended to cluster by technical specialty which suggests that there is very little overlap between specialties. In addition, there were very clear distinctions in the degree of specialization among the different career ladders.

Based on task similarity and the amount of time spent performing the tasks, the jobs performed by the respondents in this survey are as listed below and illustrated in Figure 1. GRP numbers are shown with each group as a cross-reference to computer printed summaries used in analysis of these job groups.

- I. Radiologic and Medical Laboratory Supervisors (GRP018, N=137)
- II. Nuclear Medicine Technicians (GRP110, N=21)
- III. Medical Laboratory Personnel (GRP017, N=267)
- IV. General Medical Laboratory Personnel (GRP048, N=12)
- V. Radiologic and Medical Laboratory Classroom Instructors (GRP011, N=11)
- VI. Radiologic Personnel (GRP036, N=310)

Ninety-eight percent of the respondents in the sample were found to perform jobs roughly equivalent to those described in the six major groupings listed above. The remaining two percent of the sample included members whose jobs appear unique and which did not group into any identified job type.

Brief descriptions of each of these job groups are given below. The primary job groups will be discussed first, followed by the independent job types. The average percent of time spent on each duty by the primary job groups is provided in Table 4. Table 5 reflects the background information for each of these groups while Table 6 shows the perceptions of each group in terms of how interesting they find their job, the degree to which they perceive their talents and training being used, and whether they intend to reenlist.

#### Primary Job Group Descriptions

I. Radiologic and Medical Laboratory Supervisors (GRP018). This group of 137 individuals clustered together on the basis of the supervisory and management tasks and duties they performed. They could be grouped into the four distinct job types listed below and displayed in Figure 2.

- A. General Medical Laboratory NCOICs (GRP059, N=40)
- B. Radiologic and Medical Laboratory Supervisors (GRP066, N=48)
- C. Instructors and Instructor Supervisors (GRP044, N=29)
- D. Administrative NCOICs (GRP043, N=9)

The percent time spent on duties for these groups is listed in Table 7, background information in Table 8, and job satisfaction responses in Table 9.

A. General Medical Laboratory NCOICs (GRP059). This group consists entirely of DAFSC 904X0, Medical Laboratory personnel. Sixty-three percent of the group hold the 7-skill level while the remainder are 5-skill level airmen. Forty percent of their time is spent performing supervisory and management functions and an additional 15 percent of their time is spent performing administrative duties. Seventy-three percent are assigned to USAF Hospitals or larger medical facilities. Eighty percent are supervisors and most are assigned as NCOICs of a section within the medical laboratory such as hematology, biochemistry, or clinical laboratory. Because they are very heterogeneous in the technical tasks they perform, the common tasks which group them together are supervisory in nature such as advise superiors of the status of operations, develop or improve work methods or procedures, demonstrate the use of laboratory equipment, and review laboratory procedures. They do however, spend a fair amount of time performing technical tasks and duties. They are, for the most part, middle level supervisors.

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B. Radiologic and Medical Laboratory Supervisors (GRP066). Fifty-four percent of this group are DAFSC 903X0, Radiologic personnel, while the remainder hold DAFSC 904X0. Fifty-six percent hold a 7-skill level and 36 percent hold a 9-skill level. Fully 83 percent of their time is spent performing supervisory, management, and administrative duties. Ninety percent are assigned to USAF Hospitals or larger medical facilities and most are serving as the supervisor of either the radiology clinic or the medical laboratory. Again, it is supervisory and management tasks that group these NCOs together and not technical tasks. Common tasks include counseling subordinates, establishing work priorities, writing APRs, and maintaining workload data.

C. Instructors and Instructor Supervisors (GRP044). Assigned to either the School of Health Care Sciences or a medical facility designated to support Phase II training (see INTRODUCTION of this report), members of this group are tasked primarily with providing formal technical training. Fifty-six percent are AFS 904X0 personnel and the remainder hold AFSC 903X0. Thirty-four percent of their time is spent performing tasks related to training. Overall, 72 percent of their time is spent in performing supervisory and management duties (which include training). Common tasks performed include conducting classroom training, counseling subordinates, administering or scoring tests, and arranging for training aids or materials.

D. Administrative NCOICs (GRP043). This small group of NCOs are distinguished from the other groups by the fact that they spend 39 percent of their time performing administrative or material functions. An additional 39 percent of their time is spent performing supervisory and management functions. While this is below the time spent in this area by the other groups in this cluster, only four of the nine members in the group indicated they were supervisors. All of the specialties in the survey were represented in the group. Typical tasks performed included maintaining supply records, maintaining supply stock levels, preparing requisitions for equipment, and issuing or turning in equipment.

II. Nuclear Medicine Technicians (GRP119). This very homogeneous group encompassed all of the AFS 90930/70 Nuclear Medicine Technicians in the survey sample. The group has an average grade of E-6 but only 43 percent indicated they supervise. Only 17 percent of their time is spent in supervisory and management duties. Averaging 139 tasks performed, most in the technical area, they are primarily medical technicians spending over one-third of their time in the performance of a single duty, performing in vivo organ scanning and radiography procedures. Typical tasks include: perform gallium scans, operate gamma cameras, calibrate technetium generators, and perform lung ventilation studies.

III. Medical Laboratory Personnel (GRP000). This group of AFS 904X0 personnel grouped into the following job types as displayed in Figure 3.

- A. Blood Bank Specialists (GRP046, N=24)
- B. Hematological and Chemical Procedures Specialists (GRP064, N=132)
- C. Chemical Procedures Specialists (GRP039, N=44)
- D. Hematological Procedures Specialists (GRP049, N=28)
- E. Bacteriological Procedures Specialists (GRP098, N=30)

The percent of time spent on duties, background information and job satisfaction responses for each of these groups are listed on Tables 10, 11, and 12 respectively. All of these job groups were also found in the 15 December 1978 Occupational Survey Report on the Medical Laboratory career ladder, and were reported in great detail in that document. Therefore, the job type information will not be repeated in this report except to note that the AFS 904X0 career ladder is divided into a number of very heterogeneous jobs within the medical laboratory. Each job involves separate and distinct task performances with the duty of performing general services, procedures, or maintenance functions containing those common tasks that cluster the groups together.

IV. Radiologic Personnel (GRP036). This group is composed of 310 personnel, all of whom hold a 903X0 AFS. This very homogeneous cluster was found to contain four distinct job types as listed below and illustrated in Figure 4.

- A. General Radiographers (GRP150, N=253)
- B. Administrative Radiographic Personnel (GRP172, N=39)
- C. Standard Radiographic Examination Specialists (GRP163, N=6)
- D. Advanced Radiographers (GRP065, N=6)

Since this career ladder is quite homogeneous, the principal differences in the jobs lie in the amount of time spent performing various radiographic functions. For these groups, the percent of time spent, background data, and job satisfaction responses are found in Tables 13, 14, and 15 respectively.

A. General Radiographers (GRP150). This group comprises 82 percent of the radiographers in the cluster and could generally be called basic radiographic specialists since 84 percent hold the 5-skill level. Averaging 139 tasks performed, the members of this group spend 44 percent of their time performing in a single duty, performing standard radiographic examinations. Although 20 percent indicated they were supervisors, the group averages only four percent of their time spent performing supervisory and management tasks. Common tasks include: perform radiographic examinations of various parts of the

body, correct radiographic request forms, load or unload film cassettes, and process radiographic film.

B. Administrative Radiographic Personnel (GRP172). This group of 39 individuals is distinguished from the other groups in this cluster by the percent of time spent performing administrative and supervisory duties. Seventy-two percent of the group indicated they were supervisors and 27 percent of their time is spent performing supervisory and management tasks. However, they are still spending the majority of their time performing technical duties related to their specialty. Since 85 percent are assigned to either Air Force clinics or USAF Hospitals where manning of this specialty is relatively small, these airmen function as the NCOIC, technician, and administrative specialist. This is further evidenced by the fact that this group averages 292 tasks performed compared to an average of 139 tasks performed for the General Radiographers. Distinguishing tasks performed include: scheduling patients for examinations, maintaining patient nominal index card files, preparing nominal index cards on incoming patients, and prepare film file envelopes.

C. Standard Radiographic Examination Specialists (GRP163). These six individuals, all 5-skill level airmen spend 69 percent of their time performing standard radiographic examinations. Averaging only 57 tasks performed, this group performs a very limited job function. Over fifty percent of their time is consumed performing only 22 tasks such as performing radiographic examinations of the chest, foot, ankle, or knee and preparing film file envelopes. This group has a lower expressed job interest and indicate that they do not feel they are utilizing their talents or training. None express a definite intent to reenlist.

D. Advanced Radiographers (GRP065). Unlike the previous group, these six airmen perform a variety of difficult and complex tasks relating to their career ladder. Although five of the members are DAFSC 90350 personnel, all of the group supervise. However, their primary duties are to perform advanced radiographic procedures, set up and operate special radiographic equipment, employ film subtraction techniques, and to perform or participate in special radiographic techniques. All find the job interesting and a greater percentage feel they are using their talents and training. Sixty-six percent express a probable or definite intent to reenlist.

#### Independent Job Type Descriptions

There were two job descriptions that did not fall into the job clusters. Percent time spent on duties, background information and job satisfaction responses are illustrated in Tables 16, 17, and 18 respectively.

IV. General Medical Laboratory Personnel (GRP048). This group of twelve individuals also appeared in the AFS 904X0 Occupational Survey Report of 15 December 1971. They were mostly first lieutenants

airmen performing a very small number of low difficulty general laboratory tasks. Further discussion can be found in the referenced report.

V. Radiologic and Medical Laboratory Classroom Instructors (GRP011). These instructors differed from those found in the supervisory cluster in the percent of time spent on training and other supervisory duties. Only 18 percent of this group indicated they were supervisors as opposed to 66 percent for the other group. As a result, they spent less time supervising and more time training. Fifty-six percent of their time is spent providing training compared to 34 percent for the other group of instructors. The classroom instructors do average fewer tasks performed, 25 tasks as opposed to 75 for the Instructors and Instructor Supervisors. Training tasks performed are essentially the same except that the classroom instructors spend more time performing them.

### Summary

Personnel in this survey were found for the most part to group by AFSC. With the exception of groups performing primarily supervisory and management tasks, there was almost no AFSC overlap among the job groups. Jobs associated with one medical specialty were not being performed by personnel in another AFSC. Overall, the job structure in this occupational survey tends to verify the current classification structure of these career ladders.



FIGURE 1

RADIOLOGIC, MEDICAL LABORATORY, AND NUCLEAR MEDICINE CAREER LADDER STRUCTURE

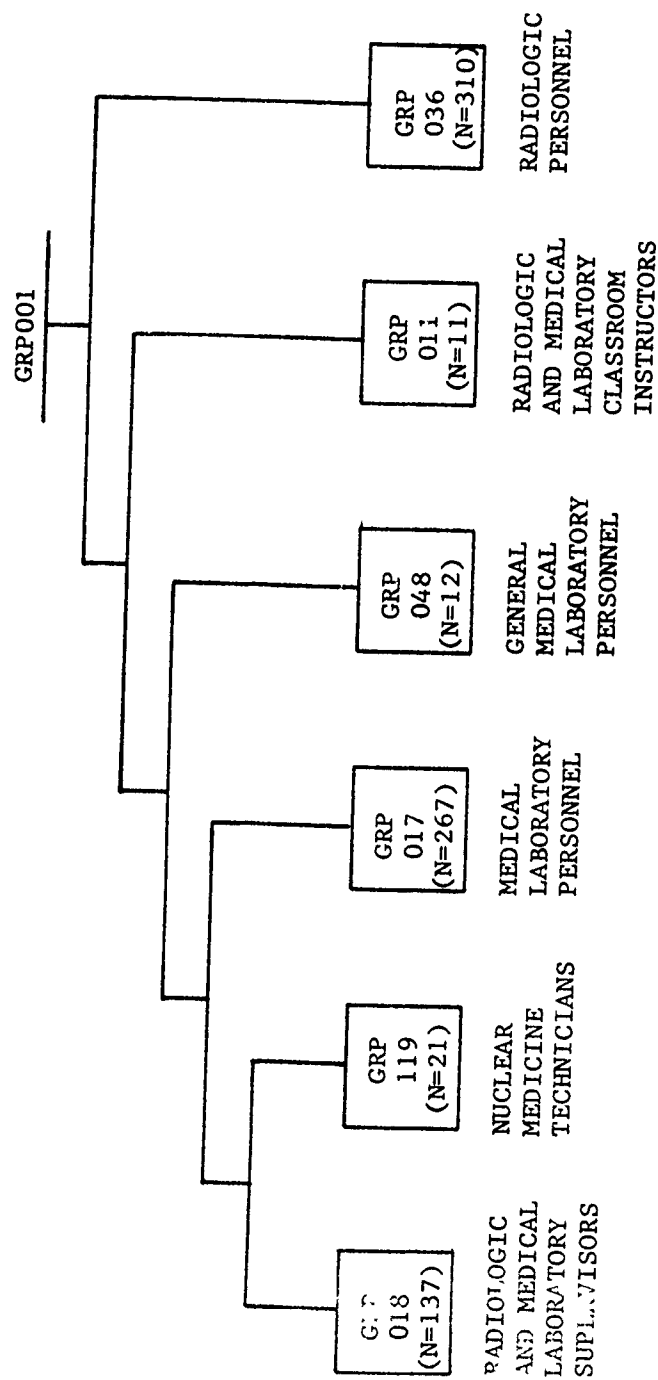


FIGURE 2  
SUPERVISORY JOB STRUCTURE

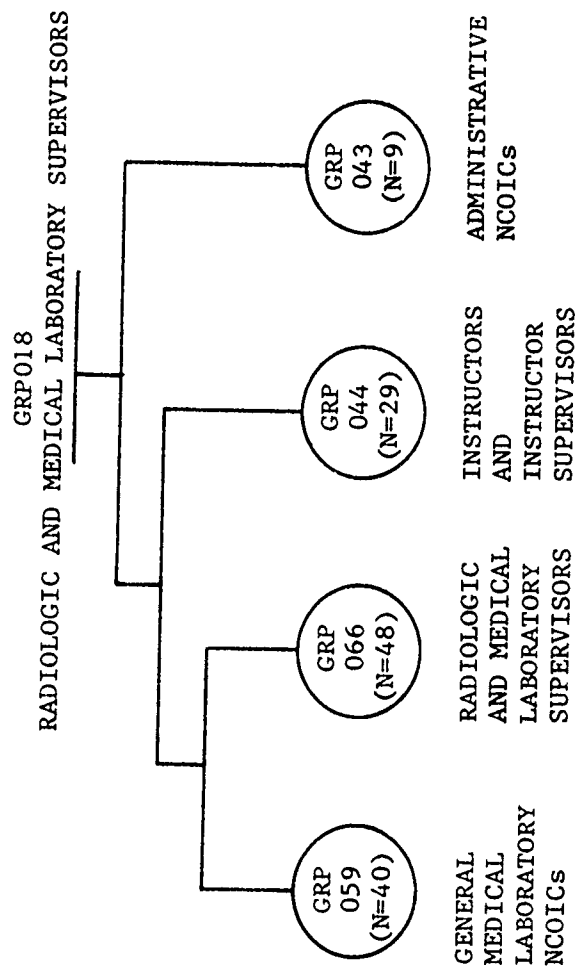


FIGURE 3

MEDICAL LABORATORY JOB STRUCTURE

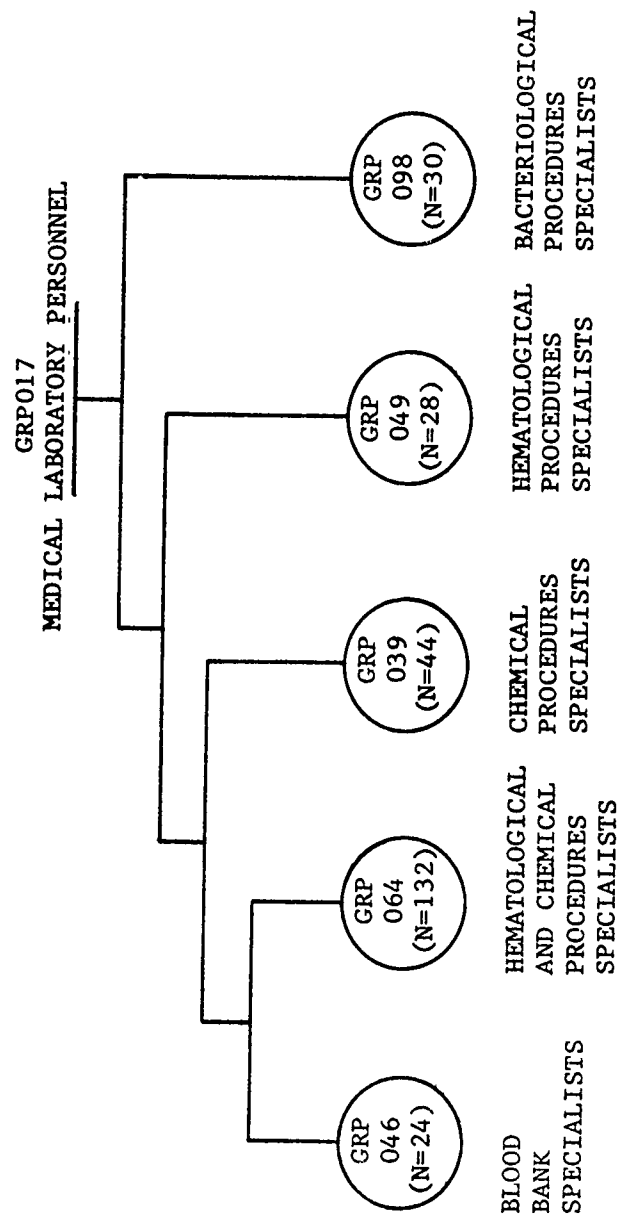


FIGURE 4

RADIOLOGIC JOB STRUCTURE

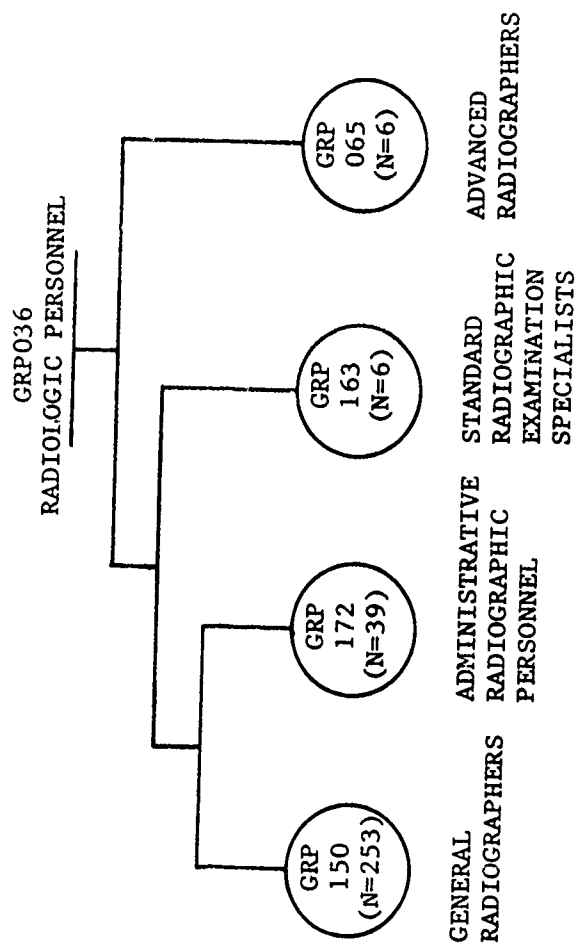


TABLE 4

PERCENT TIME SPENT ON DUTIES BY PRIMARY JOB GROUPS

DUTIES	RAD AND MED LAB SUPERVISORS (N=137)	RADIOLOGIC PERSONNEL (N=310)	MEDICAL LAB PERSONNEL (N=267)	NUCLEAR MEDICINE TECHNICIANS (N=21)
<u>SUPERVISORY AND MANAGEMENT FUNCTIONS</u>				
A PLANNING AND ORGANIZING	17	3	3	6
B DIRECTING AND IMPLEMENTING	19	3	3	6
C EVALUATING AND INSPECTING	11	1	1	4
D TRAINING	13	1	2	1
<u>ADMINISTRATIVE FUNCTIONS</u>				
E PERFORMING ADMINISTRATIVE OR MATERIEL FUNCTIONS	15	9	4	13
<u>TECHNICAL FUNCTIONS</u>				
F PERFORMING GENERAL SERVICES, PROCEDURES OR MAINTENANCE FUNCTIONS	8	5	12	9
G PERFORMING CLINICAL CHEMISTRY PROCEDURES	3	*	23	1
H PERFORMING RADIOPHARMACEUTICAL KIT PREPARATION PROCEDURES	*	*	0	9
I SETTING UP SPECIALIZED RADIOGRAPHIC EQUIPMENT	*	2	*	*
J PERFORMING SEROLOGY PROCEDURES	1	*	3	0
K PERFORMING STANDARD (ROUTINE) RADIOGRAPHIC EXAMINATIONS	*	41	*	0
L PERFORMING PARASITOLOGICAL PROCEDURES	*	*	2	0
M PERFORMING OR PARTICIPATING IN SPECIAL RADIOGRAPHIC EXAMINATIONS	*	11	*	*
N PERFORMING URINALYSIS PROCEDURES	1	*	4	0
O PERFORMING ADVANCED RADIOGRAPHIC PROCEDURES	*	2	*	*
P PERFORMING BLOOD BANKING AND IMMUNOHEMATOLOGY PROCEDURES	2	*	14	*
Q PERFORMING IN VIVO ORGAN SCANNING AND RADIORENOGRAPHY PROCEDURES	*	*	*	37
R PERFORMING HEMATOLOGICAL PROCEDURES	3	*	18	*
S PERFORMING ULTRASONOGRAPHY PROCEDURES	*	*	0	0
T PERFORMING BEDSIDE, SURGICAL, OR FIELD RADIOGRAPHY	*	6	*	0
U PERFORMING BACTERIOLOGICAL PROCEDURES	3	*	10	0
V PERFORMING IN VITRO RADIOISOTOPE DIAGNOSTIC PROCEDURES	*	*	*	3
W PROCESSING RADIOGRAPHIC FILM	1	10	*	2
X PERFORMING CLINICAL MYCOLOGY, MYCOGACTERIA, AND VIROLOGY PROCEDURES	1	*	1	0
Y PERFORMING QUALITY CONTROL FUNCTIONS	1	6	*	*
Z PERFORMING RADIATION OR RADIOISOTOPE THERAPY	*	*	*	9

\* INDICATES LESS THAN ONE PERCENT

TABLE 5

## BACKGROUND INFORMATION BY PRIMARY JOB GROUPS

	<u>RAD AND MED LAB SUPERVISORS</u>	<u>RADIOLOGIC PERSONNEL</u>	<u>MEDICAL LABORATORY PERSONNEL</u>	<u>NUCLEAR MEDICINE TECHNICIANS</u>
AVERAGE NUMBER OF TASKS PERFORMED	114	157	97	139
AVERAGE PAY GRADE	6.1	4.0	3.9	6.0
PERCENT MEMBERS WHO SUPERVISE	77%	29%	22%	43%
PERCENT ASSIGNED OVERSEAS	21%	15%	25%	10%

## DAFSC

90330	-	5%	-	-
90350	4%	78%	-	5%
90370	20%	16%	-	-
90390	7%	-	-	-
90430	1%	-	6%	-
90450	20%	-	85%	-
90470	39%	-	9%	-
90492	8%	-	-	-
90930	-	-	-	19%
90970	-	-	-	71%
90999	1%	-	-	5%
NO RESPONSE	-	1%	-	-

## AVERAGE MONTHS IN CAREER LADDER

## AVERAGE MONTHS TAFTS

## PERCENT IN FIRST ENLISTMENT

137	50	47
178	64	58
5%	59%	59%

TABLE 6

JOB INTEREST AND RELATED DATA BY PRIMARY JOB GROUPS  
(PERCENT RESPONDING)

	RAD AND MED LAB SUPERVISORS	RADIOLOGIC PERSONNEL	MEDICAL LABORATORY PERSONNEL	NUCLEAR MEDICINE TECHNICIANS
I FIND MY JOB:				
NO RESPONSE	3	2	3	0
DULL	4	7	7	0
SO-SO	12	15	11	5
INTERESTING	79	76	79	95
MY JOB UTILIZES MY TALENTS:				
NO RESPONSE	1	2	0	0
NOT AT ALL TO VERY LITTLE	12	16	14	0
FAIRLY WELL TO VERY WELL	59	71	74	71
EXCELLENTLY TO PERFECTLY	28	11	12	29
MY JOB UTILIZES MY TRAINING:				
NO RESPONSE	0	1	0	5
NOT AT ALL TO VERY LITTLE	10	14	10	0
FAIRLY WELL TO VERY WELL	64	67	73	81
EXCELLENTLY TO PERFECTLY	26	18	17	14
I PLAN TO REENLIST:				
NO RESPONSE	1	0	1	0
NO	21	5	30	5
PROBABLY NO	11	29	17	29
PROBABLY YES	22	19	27	19
YES	45	47	25	47

TABLE 7

PERCENT TIME SPENT ON DUTIES BY SUPERVISORY JOB TYPES

DUTIES	GENERAL MEDICAL LAB NCOICs (N=40)	RADIOLOGIC AND MEDICAL LABORATORY SUPERVISORS (N=48)	INSTRUCTORS AND INSTRUCTOR SUPERVISORS (N=29)	ADMINISTRATIVE NCOICs (N=9)
<u>SUPERVISORY AND MANAGEMENT FUNCTIONS</u>				
A PLANNING AND ORGANIZING	13	21	11	13
B DIRECTING AND IMPLEMENTING	13	23	18	12
C EVALUATING AND INSPECTING	7	17	9	9
D TRAINING	7	7	34	5
<u>ADMINISTRATIVE FUNCTIONS</u>				
E PERFORMING ADMINISTRATIVE OR MATERIEL FUNCTIONS	15	15	9	39
<u>TECHNICAL FUNCTIONS</u>				
F PERFORMING GENERAL SERVICES, PROCEDURES OR MAINTENANCE FUNCTIONS	12	5	5	15
G PERFORMING CLINICAL CHEMISTRY PROCEDURES	6	1	1	4
H PERFORMING RADIOPHARMACEUTICAL KIT PREPARATION PROCEDURES	0	0	0	0
I SETTING UP SPECIALIZED RADIOGRAPHIC EQUIPMENT	0	*	*	0
J PERFORMING SEROLOGY PROCEDURES	2	*	1	0
K PERFORMING STANDARD (ROUTINE) RADIOGRAPHIC EXAMINATIONS	0	1	1	0
L PERFORMING PARASITOLOGICAL PROCEDURES	2	*	0	0
M PERFORMING OR PARTICIPATING IN SPECIAL RADIOGRAPHIC EXAMINATIONS	0	*	*	0
N PERFORMING URINALYSIS PROCEDURES	2	*	*	0
O PERFORMING ADVANCED RADIOGRAPHIC PROCEDURES	0	*	*	0
P PERFORMING BLOOD BANKING AND IMMUNOHEMATOLOGY PROCEDURES	3	1	2	1
Q PERFORMING IN VIVO ORGAN SCANNING AND RADIORENOGRAPHY PROCEDURES	*	*	0	0
R PERFORMING HEMATOLOGICAL PROCEDURES	9	1	2	1
S PERFORMING ULTRASONOGRAPHY PROCEDURES	0	*	0	0
T PERFORMING BEDSIDE, SURGICAL, OR FIELD RADIOGRAPHY	0	1	0	0
U PERFORMING BACTERIOLOGICAL PROCEDURES	8	*	1	0
V PERFORMING IN VITRO RADIOISOTOPE DIAGNOSTIC PROCEDURES	*	*	0	0
W PROCESSING RADIOGRAPHIC FILM	0	1	4	*
X PERFORMING CLINICAL MYCOLOGY, MYCOGACTERIA, AND VIROLOGY PROCEDURES	1	*	*	0
Y PERFORMING QUALITY CONTROL FUNCTIONS	0	3	2	*
Z PERFORMING RADIATION OR RADIOISOTOPE THERAPY	0	1	0	0

\* INDICATES LESS THAN ONE PERCENT



TABLE 8

## BACKGROUND INFORMATION BY SUPERVISORY JOB TYPES

	GENERAL MEDICAL LAB NCOICs		RADIOLOGIC AND MEDICAL LABORATORY SUPERVISORS		INSTRUCTORS AND INSTRUCTOR SUPERVISORS		ADMINISTRATIVE NCOICs	
AVERAGE NUMBER OF TASKS PERFORMED	140		140		75		56	
AVERAGE PAY GRADE	5.6		6.9		5.7		5.6	
PERCENT MEMBERS WHO SUPERVISE	80%		92%		66%		44%	
PERCENT ASSIGNED OVERSEAS	37%		19%		0%		23%	

## DAFSC

90350	-	-	-	14%	-
90370	-	33%	33%	28%	23%
90390	-	21%	21%	-	-
90430	-	2%	2%	-	-
90450	37%	6%	6%	17%	33%
90470	63%	23%	23%	38%	33%
90492	-	15%	15%	3%	-
90999	-	-	-	-	11%

## AVERAGE MONTHS IN CAREER LADDER

## AVERAGE MONTHS TAFMS

## PERCENT IN FIRST ENLISTMENT

116	178	114	96
146	227	148	163
5%	2%	7%	0%

TABLE 9

JOB INTEREST AND RELATED DATA BY SUPERVISORY JOB TYPES  
(PERCENT RESPONDING)

	GENERAL MEDICAL LAB NCOICs	RADIOLOGIC AND MEDICAL LABORATORY SUPERVISORS	INSTRUCTORS AND INSTRUCTOR SUPERVISORS	ADMINISTRATIVE NCOICs
I FIND MY JOB:				
NO RESPONSE	2	2	3	0
DULL	5	2	0	0
SO-SO	23	8	7	0
INTERESTING	70	88	90	100
MY JOB UTILIZES MY TALENTS:				
NO RESPONSE	2	0	0	0
NOT AT ALL TO VERY LITTLE	12	18	17	0
FAIRLY WELL TO VERY WELL	66	49	62	56
EXCELLENTLY TO PERFECTLY	20	33	21	44
MY JOB UTILIZES MY TRAINING:				
NO RESPONSE	0	0	0	0
NOT AT ALL TO VERY LITTLE	10	6	10	22
FAIRLY WELL TO VERY WELL	75	67	59	45
EXCELLENTLY TO PERFECTLY	15	27	31	33
I PLAN TO REENLIST:				
NO RESPONSE	0	2	0	0
NO	15	33	14	11
PROBABLY NO	15	9	10	11
PROBABLY YES	20	23	28	33
YES	50	33	48	45

TABLE 10

PERCENT TIME SPENT ON DUTIES BY MEDICAL LABORATORY JOB TYPES

DUTIES	BLOOD BANK SPECIALISTS (N=24)	HEMAT AND CHEMICAL PROCEDURES SPECIALISTS (N=132)	CHEMICAL PROCEDURES SPECIALISTS (N=44)	HEMATOLOGICAL PROCEDURES SPECIALISTS (N=28)	BACTERIOLOGICAL PROCEDURES SPECIALISTS (N=30)
<u>SUPERVISORY AND MANAGEMENT FUNCTIONS</u>					
A PLANNING AND ORGANIZING	5	2	5	2	4
B DIRECTING AND IMPLEMENTING	6	2	4	4	3
C EVALUATING AND INSPECTING	2	1	1	1	1
D TRAINING	4	1	3	4	4
<u>ADMINISTRATIVE FUNCTIONS</u>					
E PERFORMING ADMINISTRATIVE OR MATERIAL FUNCTIONS	7	2	5	5	3
<u>TECHNICAL FUNCTIONS</u>					
F PERFORMING GENERAL SERVICES, PROCEDURES OR MAINTENANCE FUNCTIONS	11	10	13	9	17
G PERFORMING CLINICAL CHEMISTRY PROCEDURES	2	25	58	4	5
H PERFORMING RADIOPHARMACEUTICAL KIT PREPARATION PROCEDURES	0	*	0	0	0
I SETTING UP SPECIALIZED RADIOGRAPHIC EQUIPMENT	0	*	*	*	0
J PERFORMING SEROLOGY PROCEDURES	6	4	*	1	3
K PERFORMING STANDARD (ROUTINE) RADIOGRAPHIC EXAMINATIONS	0	*	*	0	0
L PERFORMING PARASITOLOGICAL PROCEDURES	*	2	*	*	5
M PERFORMING OR PARTICIPATING IN SPECIAL RADIOGRAPHIC EXAMINATIONS	0	*	*	0	0
N PERFORMING URINALYSIS PROCEDURES	*	5	3	2	1
O PERFORMING ADVANCED RADIOGRAPHIC PROCEDURES	0	*	*	0	*
P PERFORMING BLOOD BANKING AND IMMUNOHematology PROCEDURES	54	16	3	5	*
Q PERFORMING IN VIVO ORGAN SCANNING AND RADIORENOGRAPHY PROCEDURES	0	*	*	0	*
R PERFORMING HEMATOLOGICAL PROCEDURES	3	21	2	62	2
S PERFORMING ULTRASONOGRAPHY PROCEDURES	0	0	*	0	0
T PERFORMING BEDSIDE, SURGICAL, OR FIELD RADIOGRAPHY	0	*	*	0	0
U PERFORMING BACTERIOLOGICAL PROCEDURES	*	8	1	*	47
V PERFORMING IN VITRO RADIOISOTOPE DIAGNOSTIC PROCEDURES	*	*	*	*	0
W PROCESSING RADIOGRAPHIC FILM	0	*	0	0	0
X PERFORMING CLINICAL MYCOLOGY, MYCOBACTERIA, AND VIROLOGY PROCEDURES	0	1	*	*	5
Y PERFORMING QUALITY CONTROL FUNCTIONS	0	*	0	0	0
Z PERFORMING RADIATION OR RADIOISOTOPE THERAPY	0	*	*	*	0

\* LESS THAN ONE PERCENT

TABLE 11

## BACKGROUND INFORMATION BY MEDICAL LABORATORY JOB TYPES

	BLOOD BANK SPECIALISTS	HEMAT AND CHEMICAL PROCEDURES SPECIALISTS	CHEMICAL PROCEDURES SPECIALISTS	HEMATOLOGICAL PROCEDURES SPECIALISTS	BACTERIOLOGICAL PROCEDURES SPECIALISTS
AVERAGE NUMBER OF TASKS PERFORMED	67	129	88	49	49
AVERAGE PAY GRADE	4.3	3.7	4.2	4.1	4.0
PERCENT MEMBERS WHO SUPERVISE	33%	20%	25%	29%	17%
PERCENT ASSIGNED OVERSEAS	33%	29%	21%	21%	13%
DAFSC					
90430	4%	8%	5%	4%	7%
90450	88%	86%	79%	82%	86%
90470	3%	6%	16%	14%	7%
AVERAGE MONTHS IN CAREER LADDER	56	41	57	58	46
AVERAGE MONTHS TAFMS	68	50	71	67	59
PERCENT IN FIRST ENLISTMENT	42%	68%	46%	54%	53%

TABLE 12

## JOB INTEREST AND RELATED DATA BY MEDICAL LABORATORY JOB TYPES

	BLOOD BANK SPECIALISTS	HEMAT AND CHEMICAL PROCEDURES SPECIALISTS	CHEMICAL PROCEDURES SPECIALISTS	HEMATOLOGICAL PROCEDURES SPECIALISTS	BACTERIOLOGICAL PROCEDURES SPECIALISTS
I FIND MY JOB:					
NO RESPONSE	4	3	0	4	3
DULL	4	8	7	4	7
SO-SO	8	12	11	18	3
INTERESTING	84	77	82	74	87
MY JOB UTILIZES MY TALENTS:					
NO RESPONSE	0	0	0	0	0
NOT AT ALL TO VERY LITTLE	17	9	16	21	10
FAIRLY WELL TO VERY WELL	66	82	75	65	67
EXCELLENTLY TO PERFECTLY	17	9	9	14	23
MY JOB UTILIZES MY TRAINING:					
NO RESPONSE	0	0	0	0	0
NOT AT ALL TO VERY LITTLE	17	8	9	4	10
FAIRLY WELL TO VERY WELL	50	79	73	78	67
EXCELLENTLY TO PERFECTLY	33	13	18	18	23
I PLAN TO REENLIST:					
NO RESPONSE	4	1	0	0	0
NO	21	39	21	18	20
PROBABLY NO	4	17	11	21	30
PROBABLY YES	33	24	32	32	23
YES	38	19	36	29	27

TABLE 13

PERCENT TIME SPENT ON DUTIES BY RADIOLOGIC JOB TYPES

DUTIES	GENERAL RADIOGRAPHERS (N=253)	ADMINISTRATIVE RADIOGRAPHIC PERSONNEL (N=39)	STANDARD RADIOGRAPHIC EXAM SPECIALISTS (N=6)	ADVANCED RADIOGRAPHIC (N=6)
<u>SUPERVISORY AND MANAGEMENT FUNCTIONS</u>				
A PLANNING AND ORGANIZING	1	8	1	7
B DIRECTING AND IMPLEMENTING	2	9	3	11
C EVALUATING AND INSPECTING	1	6	*	5
D TRAINING	*	4	*	2
<u>ADMINISTRATIVE FUNCTIONS</u>				
E PERFORMING ADMINISTRATIVE OR MATERIEL FUNCTIONS	8	16	14	9
<u>TECHNICAL FUNCTIONS</u>				
F PERFORMING GENERAL SERVICES, PROCEDURES OR MAINTENANCE FUNCTIONS	4	5	4	6
G PERFORMING CLINICAL CHEMISTRY PROCEDURES	*	1	0	1
H PERFORMING RADIOPHARMACEUTICAL KIT PREPARATION PROCEDURES	0	*	0	0
I SETTING UP SPECIALIZED RADIOGRAPHIC EQUIPMENT	2	1	*	9
J PERFORMING SEROLOGY PROCEDURES	0	*	0	0
K PERFORMING STANDARD (ROUTINE) RADIOGRAPHIC EXAMINATIONS	44	23	69	5
L PERFORMING PARASITOLOGICAL PROCEDURES	0	*	0	0
M PERFORMING OR PARTICIPATING IN SPECIAL RADIOGRAPHIC EXAMINATIONS	12	7	*	6
N PERFORMING URINALYSIS PROCEDURES	0	*	0	0
O PERFORMING ADVANCED RADIOGRAPHIC PROCEDURES	1	1	0	16
P PERFORMING BLOOD BANKING AND IMMUNOHEMATOLOGY PROCEDURES	0	*	0	0
Q PERFORMING IN VIVO ORGAN SCANNING AND RADIORENOGRAPHY PROCEDURES	*	*	0	*
R PERFORMING HEMATOLOGICAL PROCEDURES	*	*	0	0
S PERFORMING ULTRASONOGRAPHY PROCEDURES	1	*	0	0
T PERFORMING BEDSIDE, SURGICAL, OR FIELD RADIOGRAPHY	7	3	0	1
U PERFORMING BACTERIOLOGICAL PROCEDURES	*	*	0	0
V PERFORMING IN VITRO RADIOISOTOPE DIAGNOSTIC PROCEDURES	0	*	0	0
W PROCESSING RADIOGRAPHIC FILM	10	8	5	12
X PERFORMING CLINICAL MYCOLOGY, MYCOGACTERIA, AND VIROLOGY PROCEDURES	0	*	0	0
Y PERFORMING QUALITY CONTROL FUNCTIONS	6	6	3	9

\* INDICATES LESS THAN ONE PERCENT

TABLE 14

## BACKGROUND INFORMATION BY RADIOLOGIC JOB TYPES

	GENERAL RADIOGRAPHERS	ADMINISTRATIVE RADIOGRAPHIC PERSONNEL	STANDARD RADIOGRAPHIC EXAMINATION SPECIALISTS	ADVANCED RADIOGRAPHERS
AVERAGE NUMBER OF TASKS PERFORMED	139	292	57	136
AVERAGE PAY GRADE	3.8	5.3	3.5	5.0
PERCENT MEMBERS WHO SUPERVISE	20%	72%	0%	100%
PERCENT ASSIGNED OVERSEAS	13%	26%	17%	17%
DAFSC				
90330	5%	3%	-	-
90350	84%	38%	100%	83%
90370	10%	54%	-	17%
90390	-	5%	-	-
NO RESPONSE	1%	-	-	-
AVERAGE MONTHS IN CAREER LADDER				
	40	108	44	77
AVERAGE MONTHS TAFMS				
	53	127	46	92
PERCENT IN FIRST ENLISTMENT				
	68%	18%	67%	0%

TABLE 15

JOB INTEREST AND RELATED DATA BY RADIOLOGIC JOB TYPES  
(PERCENT RESPONDING)

	GENERAL RADIOGRAPHERS	ADMINISTRATIVE RADIOGRAPHIC PERSONNEL	STANDARD RADIOGRAPHIC EXAMINATION SPECIALISTS	ADVANCED RADIOGRAPHERS
I FIND MY JOB:				
NO RESPONSE	2	3	17	0
DULL	7	5	0	0
SO-SO	14	18	33	0
INTERESTING	77	74	50	100
MY JOB UTILIZES MY TALENTS:				
NO RESPONSE	2	3	0	0
NOT AT ALL TO VERY LITTLE	15	13	67	0
FAIRLY WELL TO VERY WELL	72	71	33	67
EXCELLENTLY TO PERFECTLY	11	13	0	33
MY JOB UTILIZES MY TRAINING:				
NO RESPONSE	1	3	0	0
NOT AT ALL TO VERY LITTLE	14	8	50	17
FAIRLY WELL TO VERY WELL	68	68	33	50
EXCELLENTLY TO PERFECTLY	17	21	17	33
I PLAN TO REENLIST:				
NO RESPONSE	1	0	0	17
NO	29	20	16	0
PROBABLY NO	23	13	68	17
PROBABLY YES	26	21	16	33
YES	21	46	0	33



TABLE 16

PERCENT TIME SPENT ON DUTIES BY INDEPENDENT JOB TYPES

DUTIES	GENERAL MEDICAL LABORATORY PERSONNEL (N=12)	RADIOLOGIC AND MEDICAL LABORATORY CLASSROOM INSTRUCTORS (N=11)
<u>SUPERVISORY AND MANAGEMENT FUNCTIONS</u>		
A PLANNING AND ORGANIZING	3	3
B DIRECTING AND IMPLEMENTING	3	11
C EVALUATING AND INSPECTING	3	3
D TRAINING	0	56
<u>ADMINISTRATIVE FUNCTIONS</u>		
E PERFORMING ADMINISTRATIVE OR MATERIEL FUNCTIONS	8	11
<u>TECHNICAL FUNCTIONS</u>		
F PERFORMING GENERAL SERVICES, PROCEDURES OR MAINTENANCE FUNCTIONS	47	13
G PERFORMING CLINICAL CHEMISTRY PROCEDURES	28	1
H PERFORMING RADIOPHARMACEUTICAL KIT PREPARATION PROCEDURES	0	0
I SETTING UP SPECIALIZED RADIOGRAPHIC EQUIPMENT	0	0
J PERFORMING SEROLOGY PROCEDURES	*	0
K PERFORMING STANDARD (ROUTINE) RADIOGRAPHIC EXAMINATIONS	0	0
L PERFORMING PARASITOLOGICAL PROCEDURES	0	0
M PERFORMING OR PARTICIPATING IN SPECIAL RADIOGRAPHIC EXAMINATIONS	0	0
N PERFORMING URINALYSIS PROCEDURES	0	0
O PERFORMING ADVANCED RADIOGRAPHIC PROCEDURES	0	0
P PERFORMING BLOOD BANKING AND IMMUNOHEMATOLOGY PROCEDURES	0	0
Q PERFORMING IN VIVO ORGAN SCANNING AND RADIORENOGRAPHY PROCEDURES	*	0
R PERFORMING HEMATOLOGICAL PROCEDURES	0	0
S PERFORMING ULTRASONOGRAPHY PROCEDURES	2	0
T PERFORMING BEDSIDE, SURGICAL, OR FIELD RADIOGRAPHY	0	0
U PERFORMING BACTERIOLOGICAL PROCEDURES	0	0
V PERFORMING IN VITRO RADIOISOTOPE DIAGNOSTIC PROCEDURES	2	1
W PROCESSING RADIOGRAPHIC FILM	2	0
X PERFORMING CLINICAL MYCOLOGY, MYCOGACTERIA, AND VIROLOGY PROCEDURES	1	1
Y PERFORMING QUALITY CONTROL FUNCTIONS	*	0
Z PERFORMING RADIATION OR RADIOISOTOPE THERAPY	0	0

\* INDICATES LESS THAN ONE PERCENT

TABLE 17

## BACKGROUND INFORMATION BY INDEPENDENT JOB TYPES

	GENERAL MEDICAL LABORATORY PERSONNEL	RADIOLOGIC AND MEDICAL LABORATORY CLASSROOM INSTRUCTORS
--	---	---

AVERAGE NUMBER OF TASKS PERFORMED

16 25

AVERAGE PAY GRADE

3.4 5.1

PERCENT MEMBERS WHO SUPERVISE

17% 18%

PERCENT ASSIGNED OVERSEAS

8% 0%

DAFSC

90350  
90370  
90430  
90450  
90470

-  
-  
17%  
75%  
8%

18%  
10%  
-  
36%  
36%

AVERAGE MONTHS IN CAREER LADDER

39 88

AVERAGE MONTHS TAFMS

48 123

PERCENT IN FIRST ENLISTMENT

67% 18%

TABLE 18

JOB INTEREST AND RELATED DATA BY INDEPENDENT JOB TYPES  
(PERCENT RESPONDING)

	GENERAL MEDICAL LABORATORY PERSONNEL		RADIOLOGIC AND MEDICAL LABORATORY CLASSROOM INSTRUCTORS	
I FIND MY JOB:				
NO RESPONSE	0		0	
DULL	0		0	
SO-SO	33		9	
INTERESTING	67		91	
MY JOB UTILIZES MY TALENTS:				
NO RESPONSE	0		0	
NOT AT ALL TO VERY LITTLE	33		18	
FAIRLY WELL TO VERY WELL	59		55	
EXCELLENTLY TO PERFECTLY	8		27	
MY JOB UTILIZES MY TRAINING:				
NO RESPONSE	0		0	
NOT AT ALL TO VERY LITTLE	58		0	
FAIRLY WELL TO VERY WELL	34		82	
EXCELLENTLY TO PERFECTLY	8		18	
I PLAN TO REENLIST:				
NO RESPONSE	0		0	
NO	9		27	
PROBABLY NO	33		18	
PROBABLY YES	33		46	
YES	25		9	

## ANALYSIS OF DAFSC GROUPS

In conjunction with examining the job structure of the career ladder, DAFSC groups are also examined as part of each occupational analysis. This analysis allows for the identification of skill level differences and for comparison across career ladders of personnel performing at the same skill level. This data by DAFSC groups is used in the analysis of career ladder documents such as the AFR 39-1 Specialty Descriptions and the Specialty Training Standard (STS).

Jobs within the Radiologic and Nuclear Medicine career ladder represented very homogeneous groupings encompassing duties and tasks specific to their respective specialties. Medical Laboratory personnel, on the other hand, were much more heterogeneous in task performance. As illustrated in the CAREER LADDER STRUCTURE section, these airmen tended to specialize in a specific functional area rather than perform duties and tasks across the wide spectrum of the Medical Laboratory specialty. Table 19 depicts the relative percent of time spent on the various duties listed in the job inventory by each career ladder group. This table more clearly illustrates the differences in the types of jobs performed by each ladder. In addition, within the career ladders, there is a clear differentiation between 3- and 5-skill level technical specialists and the 7- and 9-skill level supervisors. These differences are discussed in detail for each specialty in the sections below.

### AFS 903X0 Skill Level Groups

As a group, DAFSC 90330 Apprentice Radiologic Specialists perform an average of 146 tasks of the 980 tasks in the job inventory. Seventy-nine percent of their time is spent performing in the four duties of performing routine radiographic examinations, processing radiographic film, performing or participating in special radiographic examinations, and performing bedside, surgical or field radiography (see Table 20). In total, 92 percent of their time is spent performing technical duties and functions related to the Radiologic career ladder.

The 5-skill level Radiologic Specialists, like the 3-skill level group, spend a large percentage of their time performing routine radiographic examinations, processing radiographic film, and performing or participating in special radiographic examinations (see Table 20). With the exception of an increase in the percent of time spent performing administrative duties and the addition of supervisory and management responsibilities, there appears to be no major differences in the types of jobs performed between 3- and 5-skill level Radiologic Specialists. Both groups are very homogeneous in terms of technical tasks performed and the percent of time spent on those tasks. Representative tasks performed by DAFSC 90350 personnel are listed in Table 21.

At the 7-skill level, tasks performed shift from technical toward supervisory functions. Even so, DAFSC 90370 airmen spend only 38 percent of their time performing supervisory and management functions. As is found in many of the medical career ladders, Radiologic Technicians function more as technicians than as supervisors and managers. Seventy-eight percent of the group indicated that they were supervisors of subordinate personnel, but at the same time they perform many of the same tasks and duties as those they supervise. This is further evidenced by examining the tasks which best differentiate between the 5- and 7-skill level groups. As illustrated in Table 22, those tasks with the greatest differences in the percent of members performing are supervisory and management tasks. Those tasks performed by large numbers of DAFSC 90350 personnel are also performed by a relatively high number of DAFSC 90370 personnel. Representative tasks for this group are listed in Table 23.

DAFSC 90390 personnel are managers in this career ladder. Spending 83 percent of their time on supervisory or management duties, 83 percent of the group indicated they were supervisors. Because they are involved much more strictly in management they are more homogeneous than their 7-skill level counterparts. This can be seen in Table 24 which list the tasks that best differentiate between the skill levels. Also shown are typical technical tasks performed by DAFSC 90370 airmen. Representative tasks performed by 9-skill level airmen are depicted in Table 25.

#### AFS 904X0 Skill Level Groups

Since a detailed analysis of this DAFSC is presented in the AFS 904X0 Occupational Survey Report published on 15 December 1978, only a brief summary and representative data is included in this report. The results of both studies were essentially the same.

Personnel in the AFS 904X0 career ladder were found to progress from the performance of primarily technical tasks and duties to the performance of mostly supervisory, management, and administrative tasks and duties as they advanced from the 3- through the 9-skill level (see Table 26). The 5-skill level airmen were found to be fairly heterogeneous, performing a wide variety of technical tasks as shown in Table 27. Table 28 illustrates the differences between the technically oriented 5-skill level airmen and the more management oriented 7-skill level technician. Representative tasks for this relatively heterogeneous group are presented in Table 29. Like the 7-skill level Radiologic Technicians, the Medical Laboratory Technicians also spend a great deal of time performing technical tasks. It is these tasks that distinguish them from the 9-skill level superintendents as shown on Table 30. DAFSC 90492 personnel were found to be a much more homogeneous group primarily due to their nearly exclusive performance of supervisory, management, and administrative tasks and duties. Examples are listed in Table 31. Overall, the DAFSC structure was found to be a logical progression of jobs where the technical complexity and management responsibilities increased as skill level increased.

### AFS 909X0 Skill Level Groups

There were an insufficient number of DAFSC 90930 and DAFSC 90999 personnel in the survey sample on which to base any meaningful conclusions. However, their percent of time spent on duties is included in Table 32 with that of DAFSC 90970 for comparative purposes only.

Nuclear Medicine Technicians were found to be a very homogeneous group of specialized individuals averaging 156 tasks performed, and spending over 80 percent of their time performing technical and administrative tasks. Thirty-five percent of their time is spent performing in a single duty area, performing in vivo organ scanning and radiorenography procedures. Clearly, they are technicians and not managers. Although 43 percent of the group indicated they were supervisors, they appear to have very little responsibility for those tasks normally performed by supervisors as evidenced by the representative tasks listed for this DAFSC in Table 33.

### Summary

While 3- and 5-skill level airmen in the DAFSCs examined performed strictly as technical specialists, 7-skill level airmen performed as a combination of technician and supervisor. It was the 9-skill level superintendents that were clearly the managers in each career ladder. There was no indication within the job description of any of the DAFSCs of any task overlap among the Radiologic, Medical Laboratory, or Nuclear Medicine career ladders in the technical duties area. There was however, a great deal of overlap in the performance of supervisory and management duties among 9-skill level airmen in this survey sample. Although it was not the original intent of this study, there appears at least from the data provided by 9-skill level airmen in this survey sample that there might be a possibility for some consolidation of these specialties at the Senior Enlisted Manager Level.

TABLE 19  
PERCENT TIME SPENT ON DUTIES BY DAFSC GROUPS

DUTIES	903X0 (N=369)	904X0 (N=383)	909X0 (N=21)
<u>SUPERVISORY AND MANAGEMENT FUNCTIONS</u>			
A PLANNING AND ORGANIZING	5	6	7
B DIRECTING AND IMPLEMENTING	6	7	7
C EVALUATING AND INSPECTING	3	3	4
D TRAINING	3	6	1
<u>ADMINISTRATIVE FUNCTIONS</u>			
E PERFORMING ADMINISTRATIVE OR MATERIEL FUNCTIONS	11	7	15
<u>TECHNICAL FUNCTIONS</u>			
F PERFORMING GENERAL SERVICES, PROCEDURES OR MAINTENANCE FUNCTIONS	5	12	10
G PERFORMING CLINICAL CHEMISTRY PROCEDURES	*	18	1
H PERFORMING RADIOPHARMACEUTICAL KIT PREPARATION PROCEDURES	*	*	8
I SETTING UP SPECIALIZED RADIOGRAPHIC EQUIPMENT	1	*	*
J PERFORMING SEROLOGY PROCEDURES	*	3	0
K PERFORMING STANDARD (ROUTINE) RADIOGRAPHIC EXAMINATIONS	34	*	0
L PERFORMING PARASITOLOGICAL PROCEDURES	*	2	0
M PERFORMING OR PARTICIPATING IN SPECIAL RADIOGRAPHIC EXAMINATIONS	9	*	*
N PERFORMING URINALYSIS PROCEDURES	*	3	0
O PERFORMING ADVANCED RADIOGRAPHIC PROCEDURES	2	*	*
P PERFORMING BLOOD BANKING AND IMMUNOHEMATOLOGY PROCEDURES	*	10	*
Q PERFORMING IN VIVO ORGAN SCANNING AND RADIORENOGRAPHY PROCEDURES	*	*	35
R PERFORMING HEMATOLOGICAL PROCEDURES	*	14	*
S PERFORMING ULTRASONOGRAPHY PROCEDURES	1	0	0
T PERFORMING BEDSIDE, SURGICAL, OR FIELD RADIOGRAPHY	5	*	0
U PERFORMING BACTERIOLOGICAL PROCEDURES	*	8	0
V PERFORMING IN VITRO RADIOISOTOPE DIAGNOSTIC PROCEDURES	*	*	3
W PROCESSING RADIOGRAPHIC FILM	9	*	1
X PERFORMING CLINICAL MYCOLOGY, MYCOGACTERIA, AND VIROLOGY PROCEDURES	*	1	0
Y PERFORMING QUALITY CONTROL FUNCTIONS	5	0	*
Z PERFORMING RADIATION OR RADIOISOTOPE THERAPY	1	*	8

\* INDICATES LESS THAN ONE PERCENT

TABLE 20

PERCENT TIME SPENT ON DUTIES BY AFS 903X0 DAFSC GROUPS

DUTIES	90330 (N=15)	90350 (N=260)	90370 (N=82)	90390 (N=12)
<u>SUPERVISORY AND MANAGEMENT FUNCTIONS</u>				
A PLANNING AND ORGANIZING	1	2	10	19
B DIRECTING AND IMPLEMENTING	1	3	13	24
C EVALUATING AND INSPECTING	*	1	7	18
D TRAINING	*	2	8	6
<u>ADMINISTRATIVE FUNCTIONS</u>				
E PERFORMING ADMINISTRATIVE OR MATERIEL FUNCTIONS	6	9	14	16
<u>TECHNICAL FUNCTIONS</u>				
F PERFORMING GENERAL SERVICES, PROCEDURES OR MAINTENANCE FUNCTIONS	4	5	5	5
G PERFORMING CLINICAL CHEMISTRY PROCEDURES	1	*	*	*
H PERFORMING RADIOPHARMACEUTICAL KIT PREPARATION PROCEDURES	0	*	0	0
I SETTING UP SPECIALIZED RADIOGRAPHIC EQUIPMENT	1	2	1	1
J PERFORMING SEROLOGY PROCEDURES	*	*	*	0
K PERFORMING STANDARD (ROUTINE) RADIOGRAPHIC EXAMINATIONS	44	40	19	2
L PERFORMING PARASITOLOGICAL PROCEDURES	*	*	0	0
M PERFORMING OR PARTICIPATING IN SPECIAL RADIOGRAPHIC EXAMINATIONS	12	11	5	1
N PERFORMING URINALYSIS PROCEDURES	*	*	*	0
O PERFORMING ADVANCED RADIOGRAPHIC PROCEDURES	2	2	1	1
P PERFORMING BLOOD BANKING AND IMMUNOHEMATOLOGY PROCEDURES	*	*	*	0
Q PERFORMING IN VIVO ORGAN SCANNING AND RADIORENOGRAPHY PROCEDURES	*	*	*	0
R PERFORMING HEMATOLOGICAL PROCEDURES	*	*	*	0
S PERFORMING ULTRASONOGRAPHY PROCEDURES	*	1	1	0
T PERFORMING BEDSIDE, SURGICAL, OR FIELD RADIOGRAPHY	9	6	3	1
U PERFORMING BACTERIOLOGICAL PROCEDURES	*	*	*	0
V PERFORMING IN VITRO RADIOISOTOPE DIAGNOSTIC PROCEDURES	*	*	0	*
W PROCESSING RADIOGRAPHIC FILM	14	10	7	2
X PERFORMING CLINICAL MYCOLOGY, MYCOGACTERIA, AND VIROLOGY PROCEDURES	*	*	*	0
Y PERFORMING QUALITY CONTROL FUNCTIONS	4	6	5	4
Z PERFORMING RADIATION OR RADIOISOTOPE THERAPY	*	*	1	0

\* INDICATES LESS THAN ONE PERCENT



TABLE 21  
 REPRESENTATIVE TASKS PERFORMED BY DAFSC 90350 PERSONNEL  
 (N=260)

TASKS	PERCENT MEMBERS PERFORMING
K461 PERFORM RADIOGRAPHIC EXAMINATIONS OF THE CHEST	93
K464 PERFORM RADIOGRAPHIC EXAMINATIONS OF THE ELBOW	92
K471 PERFORM RADIOGRAPHIC EXAMINATIONS OF THE HIPS	92
K475 PERFORM RADIOGRAPHIC EXAMINATIONS OF THE LOWER LEG	92
K476 PERFORM RADIOGRAPHIC EXAMINATIONS OF THE LUMBAR SPINE	92
K482 PERFORM RADIOGRAPHIC EXAMINATIONS OF THE PELVIS	92
K483 PERFORM RADIOGRAPHIC EXAMINATIONS OF THE RIBS	92
K493 PERFORM RADIOGRAPHIC EXAMINATIONS OF THE TOES	92
K494 PERFORM RADIOGRAPHIC EXAMINATIONS OF THE SACROILIAC JOINTS	92
W868 LOAD OR UNLOAD CASSETTES	90
W877 PROCESS RADIOGRAPHIC FILM AUTOMATICALLY	87
W864 IDENTIFY RADIOGRAPHIC FILMS WITH IDENTIFIER	87
Y901 CORRECT RADIOGRAPHIC REQUEST FORMS (SF 519A)	84
W859 CLEAN AUTOMATIC FILM PROCESSOR CROSSEVERS	81
W862 CLEAN INTENSIFYING SCREENS	81
F220 ASSIST PATIENTS TO OR FROM LITTERS OR WHEELCHAIRS	78
Y905 IDENTIFY FILM QUALITY PROBLEMS SUCH AS IMPROPER POSITIONING OR RADIOGRAPHIC TECHNIQUES	77

TABLE 22

TASKS WHICH BEST DIFFERENTIATE BETWEEN DAFSC 90350 AND DAFSC 90370 PERSONNEL  
(PERCENT MEMBERS PERFORMING)

TASKS	90350	90370	DIFFERENCE
C116 WRITE APRs	23	78	-55
B83 SUPERVISE RADIOLOGIC SPECIALISTS (AFSC 90350)	22	74	-52
B42 COUNSEL SUBORDINATES	28	78	-50
A5 COORDINATE ACTIVITIES WITH OTHER AGENCIES OR ORGANIZATIONS	17	63	-46
A3 ASSIGN PERSONNEL TO DUTY POSITIONS	22	66	-44
C114 REVIEW OR INDORSE AIRMAN PERFORMANCE REPORTS (APRs), SPECIAL AWARDS, OR PERSONNEL ACTIONS	11	52	-41
C105 EVALUATE WORK SCHEDULES	10	50	-40
B43 DEVELOP OR IMPROVE WORK METHODS OR PROCEDURES	37	77	-40
E197 PREPARE REQUISITIONS FOR EQUIPMENT	9	49	-40
A37 SCHEDULE LEAVES OR PASSES	13	52	-39
M518 ASSIST FLOUROSCOPIST IN PERFORMANCE OF BARIUM ENEMAS	75	39	+36
T805 PERFORM BEDSIDE RADIOGRAPHY ON PATIENTS NOT IN TRACTION	72	39	+33
M515 ASSIST FLUOROSCOPIST DURING BARIUM SWALLOW EXAMINATIONS	75	43	+32
T817 PRODUCE RADIOGRAPHS IN EMERGENCY ROOM	64	32	+32
K461 PERFORM RADIOGRAPHIC EXAMINATIONS OF THE CHEST	93	61	+32
T818 PRODUCE RADIOGRAPHS IN NURSERY	65	33	+32
M516 ASSIST FLOUROSCOPIST DURING PERFORMANCE OF UPPER GASTROINTESTINAL (UGI) SERIES	75	44	+31
M519 ASSIST FLOUROSCOPIST IN PERFORMANCE OF SMALL BOWEL SERIES	73	42	+31
K452 PERFORM LONG BONE STUDIES	80	49	+31
W862 CLEAN INTENSIFYING SCREENS	81	50	+31

TABLE 23  
 REPRESENTATIVE TASKS PERFORMED BY DAFSC 90370 PERSONNEL  
 (N=82)

TASKS	PERCENT MEMBERS PERFORMING
A1 ADVISE SUPERIORS ON STATUS OF OPERATIONS	78
B42 COUNSEL SUBORDINATES	78
C116 WRITE APRs	78
B43 DEVELOP OR IMPROVE WORK METHODS OR PROCEDURES	77
B83 SUPERVISE RADIOLOGIC SPECIALISTS (AFSC 90350)	74
Y905 IDENTIFY FILM QUALITY PROBLEMS SUCH AS IMPROPER POSITIONING OR RADIOGRAPHIC TECHNIQUES	67
Y906 IDENTIFY RADIOGRAPHIC FILM ARTIFACTS	67
Y900 CORRECT RADIOGRAPHIC FILM ARTIFACTS	67
A3 ASSIGN PERSONNEL TO DUTY POSITIONS	66
Y901 CORRECT RADIOGRAPHIC REQUEST FORMS (SF 519A)	66
E210 SCHEDULE PATIENTS FOR EXAMINATIONS	66
F220 ASSIST PATIENTS TO OR FROM LITTERS OR WHEELCHAIRS	66

TABLE 24

TASKS WHICH BEST DIFFERENTIATE BETWEEN DAFSC 90370 AND DAFSC 90390 PERSONNEL  
(PERCENT MEMBERS PERFORMING)

TASKS	90370	90390	DIFFERENCE
C103 EVALUATE SUGGESTIONS	24	100	-76
A9 DESIGN OR DEVELOP ORGANIZATIONAL CHARTS	26	100	-74
C117 WRITE CIVILIAN PERFORMANCE RATINGS OR SUPERVISORY APPRAISALS	20	92	-72
C89 EVALUATE BUDGETING OR FINANCIAL REQUIREMENTS	34	100	-66
A34 PREPARE JOB DESCRIPTIONS	27	92	-65
B61 INITIATE PERSONNEL ACTIONS	35	100	-65
C87 EVALUATE ADMINISTRATIVE FORMS, FILES, OR PROCEDURES	37	100	-63
C118 WRITE STAFF STUDIES, SURVEYS, OR SPECIAL REPORTS	13	75	-62
D124 ASSIGN PHASE I OR PHASE II COURSE INSTRUCTORS OR SUPERVISORS	15	75	-60
C115 SELECT INDIVIDUALS FOR SPECIALIZED TRAINING	23	83	-60
K454 PERFORM RADIOGRAPHIC EXAMINATIONS OF THE ACROMIO-CLAVICULAR (A-C) JOINTS	60	8	+52
Y901 CORRECT RADIOGRAPHIC REQUEST FORMS (SF 519A)	66	17	+49
K458 PERFORM RADIOGRAPHIC EXAMINATIONS OF THE ANKLE	63	17	+46
K463 PERFORM RADIOGRAPHIC EXAMINATIONS OF THE COCCYX	63	17	+46
K468 PERFORM RADIOGRAPHIC EXAMINATIONS OF THE FOREARM	63	17	+46
K469 PERFORM RADIOGRAPHIC EXAMINATIONS OF THE FOOT	63	17	+46
K474 PERFORM RADIOGRAPHIC EXAMINATIONS OF THE KNEE	63	17	+46
K475 PERFORM RADIOGRAPHIC EXAMINATIONS OF THE LOWER LEG	63	17	+46
K476 PERFORM RADIOGRAPHIC EXAMINATIONS OF THE LUMBAR SPINE	63	17	+46
K477 PERFORM RADIOGRAPHIC EXAMINATIONS OF THE MANDIBLE	63	17	+46

TABLE 25  
 REPRESENTATIVE TASKS PERFORMED BY DAFSC 90390 PERSONNEL  
 (N=12)

TASKS	PERCENT MEMBERS PERFORMING
A1 ADVISE SUPERIORS ON STATUS OF OPERATIONS	100
A5 COORDINATE ACTIVITIES WITH OTHER AGENCIES OR ORGANIZATIONS	100
A8 COORDINATE WORK ORDERS OR REQUESTS WITH BASE CIVIL ENGINEERS OF HOSPITAL BUSINESS OFFICE	100
A9 DESIGN OR DEVELOP ORGANIZATIONAL CHARTS	100
A13 ESTABLISH OR PLAN QUALITY CONTROL PROGRAMS	100
B42 COUNSEL SUBORDINATES	100
B45 DIRECT MAINTENANCE OF ADMINISTRATIVE FILES	100
B58 IMPLEMENT QUALITY CONTROL PROGRAMS	100
B62 INTERPRET POLICIES, DIRECTIVE, OR PROCEDURES FOR SUBORDINATES	100
B85 SUPERVISE RADIOLOGIC TECHNICIANS (AFSC 90370)	100
C87 EVALUATE ADMINISTRATIVE FORMS, FILES, OR PROCEDURES	100
C103 EVALUATE SUGGESTIONS	100
C114 REVIEW OR INDORSE AIRMAN PERFORMANCE REPORTS (APRs), SPECIAL AWARDS, OR PERSONNEL ACTIONS	100
C116 WRITE APRs	100

TABLE 26

PERCENT TIME SPENT ON DUTIES BY AFS 904X0 DAFSC GROUPS

DUTIES	90430 (N=20)	90450 (N=270)	90470 (N=82)	90492 (N=11)
<u>SUPERVISORY AND MANAGEMENT FUNCTIONS</u>				
A PLANNING AND ORGANIZING	3	4	13	24
B DIRECTING AND IMPLEMENTING	2	4	14	24
C EVALUATING AND INSPECTING	1	1	9	16
D TRAINING	1	3	13	14
<u>ADMINISTRATIVE FUNCTIONS</u>				
E PERFORMING ADMINISTRATIVE OR MATERIEL FUNCTIONS	2	5	13	14
<u>TECHNICAL FUNCTIONS</u>				
F PERFORMING GENERAL SERVICES, PROCEDURES OR MAINTENANCE FUNCTIONS	14	13	10	3
G PERFORMING CLINICAL CHEMISTRY PROCEDURES	27	22	9	3
H PERFORMING RADIOPHARMACEUTICAL KIT PREPARATION PROCEDURES	0	0	0	*
I SETTING UP SPECIALIZED RADIOGRAPHIC EQUIPMENT	0	*	0	0
J PERFORMING SEROLOGY PROCEDURES	5	3	1	*
K PERFORMING STANDARD (ROUTINE) RADIOGRAPHIC EXAMINATIONS	*	*	*	0
L PERFORMING PARASITOLOGICAL PROCEDURES	1	2	*	*
M PERFORMING OR PARTICIPATING IN SPECIAL RADIOGRAPHIC EXAMINATIONS	0	*	0	0
N PERFORMING URINALYSIS PROCEDURES	2	3	1	*
O PERFORMING ADVANCED RADIOGRAPHIC PROCEDURES	0	*	*	0
P PERFORMING BLOOD BANKING AND IMMUNOHEMATOLOGY PROCEDURES	19	12	5	1
Q PERFORMING IN VIVO ORGAN SCANNING AND RADIORENOGRAPHY PROCEDURES	0	*	0	*
R PERFORMING HEMATOLOGICAL PROCEDURES	13	17	7	1
S PERFORMING ULTRASONOGRAPHY PROCEDURES	0	0	0	0
T PERFORMING BEDSIDE, SURGICAL, OR FIELD RADIOGRAPHY	0	*	0	*
U PERFORMING BACTERIOLOGICAL PROCEDURES	9	10	3	*
V PERFORMING IN VITRO RADIOISOTOPE DIAGNOSTIC PROCEDURES	*	*	*	0
W PROCESSING RADIOGRAPHIC FILM	0	*	0	0
X PERFORMING CLINICAL MYCOLOGY, MYCOBACTERIA, AND VIROLOGY PROCEDURES	1	1	1	*
Y PERFORMING QUALITY CONTROL FUNCTIONS	*	0	0	0
Z PERFORMING RADIATION OR RADIOISOTOPE THERAPY	*	*	*	0

\* INDICATES LESS THAN ONE PERCENT

TABLE 27  
 REPRESENTATIVE TASKS PERFORMED BY DAFSC 90450 PERSONNEL  
 (N=270)

TASKS	PERCENT MEMBERS PERFORMING
F221 CLEAN LABORATORY FACILITIES OR IMMEDIATE WORK AREA	81
F259 PROCESS SPECIMENS FOR LABORATORY EXAMINATIONS	63
R763 PERFORM WHITE BLOOD CELL DIFFERENTIALS, MANUAL	62
R759 PERFORM WHITE BLOOD CELL COUNTS, AUTOMATED	59
F230 HANDLE OR STORE DANGEROUS CHEMICALS	58
R751 PERFORM RETICULOCYTE COUNTS	57
P636 PERFORM CROSSMATCHING TESTS	57
R732 PERFORM ERYTHROCYTE SEDIMENTATION RATE TESTS	57
R750 PERFORM RED BLOOD CELL MORPHOLOGY STUDIES	56
F231 INSTRUCT PATIENTS ON PROPER COLLECTION OR SUBMISSION OF SPECIMENS FOR SPECIAL STUDIES	56
F222 CLEAN OR INSPECT LABORATORY GLASSWARE FOR SPOTS, CHEMICAL RESIDUES, SCRATCHES, AND CRACKS	
P627 PERFORM ABO GROUPINGS AND RH TYPINGS, INCLUDING DU	55
G275 PERFORM AMYLASE SCREENING OR QUANTITATIVE TESTS	55
	55

TABLE 28

TASKS WHICH BEST DIFFERENTIATE BETWEEN DAFSC 90450 AND DAFSC 90470 PERSONNEL  
(PERCENT MEMBERS PERFORMING)

TASKS	90450	90470	DIFFERENCE
C116 WRITE APRs	16	80	-64
B42 COUNSEL SUBORDINATES	25	88	-63
B78 SUPERVISE MEDICAL LABORATORY SPECIALISTS (AFSC 90450)	26	82	-56
A3 ASSIGN PERSONNEL TO DUTY POSITIONS	24	72	-48
A2 ANALYZE WORK LOAD REQUIREMENTS	32	77	-45
A27 PLAN OR SCHEDULE WORK ASSIGNMENTS	23	67	-44
A14 ESTABLISH PERFORMANCE STANDARDS	15	59	-44
A37 SCHEDULE LEAVES OR PASSES	10	54	-44
B70 SCHEDULE OR POST DUTY ROSTERS	13	54	-41
C90 EVALUATE COMPLIANCE WITH WORK STANDARDS	9	49	-40
R720 PERFORM BLOOD HEMOGLOBIN TESTS, AUTOMATED	53	24	+29
G384 PERFORM SODIUM DETERMINATIONS, AUTOMATED	51	24	+27
P647 PERFORM INDIRECT COOMBS PROCEDURES	48	21	+27
P636 PERFORM CROSSMATCHING TESTS	57	30	+27
G275 PERFORM AMYLASE SCREENING OR QUANTITATIVE TESTS	55	29	+26
R763 PERFORM WHITE BLOOD CELL DIFFERENTIALS, MANUAL	62	37	+25
N579 PERFORM MACROSCOPIC EXAMINATIONS, INCLUDING COLOR, APPEARANCE, PH, OR SPECIFIC GRAVITY	53	28	+25
P637 PERFORM DIRECT COOMBS PROCEDURES	53	28	+25
P627 PERFORM ABO GROUPINGS AND RH TYPINGS, INCLUDING DU	55	32	+23
G279 PERFORM BILIRUBIN TESTS, MANUAL, USING MICROTECHNIQUES	46	23	+23



TABLE 29  
 REPRESENTATIVE TASKS PERFORMED BY DAFSC 90470 PERSONNEL  
 (N=82)

TASKS	PERCENT MEMBERS PERFORMING
B42 COUNSEL SUBORDINATES	88
A1 ADVISE SUPERIORS ON STATUS OF OPERATIONS	85
B78 SUPERVISE MEDICAL LABORATORY SPECIALISTS (AFSC 90450)	82
C116 WRITE APRs	80
A2 ANALYZE WORK LOAD REQUIREMENTS	77
B43 DEVELOP OR IMPROVE WORK METHODS OR PROCEDURES	72
A3 ASSIGN PERSONNEL TO DUTY POSITIONS	72
B66 ORIENT NEWLY ASSIGNED PERSONNEL	72
D135 DEMONSTRATE USE OF LABORATORY EQUIPMENT	71
A27 PLAN OR SCHEDULE WORK ASSIGNMENTS	67
F221 CLEAN LABORATORY FACILITIES OR IMMEDIATE WORK AREA	66
B69 RESOLVE MEDICAL LABORATORY TECHNICAL PROBLEMS	62

TABLE 30

TASKS WHICH BEST DIFFERENTIATE BETWEEN DAFSC 90470 AND DAFSC 90492 PERSONNEL  
(PERCENT MEMBERS PERFORMING)

TASKS	90470	90492	DIFFERENCE
B56 IMPLEMENT GROUND SAFETY PROGRAMS OR PROCEDURES	22	82	-60
B44 DIRECT CRITIQUE PROGRAMS	23	82	-59
A8 COORDINATE WORK ORDERS OR REQUESTS WITH BASE CIVIL ENGINEERS OR HOSPITAL BUSINESS OFFICE	33	91	-58
A11 ESTABLISH CRITIQUE PROGRAMS SUCH AS PATIENT, STUDENT, PHASE II CRITIQUES	20	73	-53
B72 SERVE ON BOARDS OR COMMITTEES	29	82	-53
A36 REVIEW UNIT EMERGENCY OR DISASTER PLANS	21	73	-52
A25 PLAN OR ESTABLISH LABORATORY ADMINISTRATIVE METHODS AND PROCEDURES	39	91	-52
C87 EVALUATE ADMINISTRATIVE FORMS, FILES, OR PROCEDURES	40	91	-51
C88 EVALUATE ALERT OR DISASTER PREPAREDNESS PROCEDURES	13	64	-51
A9 DESIGN OR DEVELOP ORGANIZATIONAL CHARTS	23	73	-51
F221 CLEAN LABORATORY FACILITIES OR IMMEDIATE WORK AREA	66	9	+57
F259 PROCESS SPECIMENS FOR LABORATORY EXAMINATIONS	50	9	+41
R756 PERFORM THROMBOCYTE COUNTS, MANUAL	34	0	+34
F247 PERFORM OPERATOR MAINTENANCE ON LABORATORY EQUIPMENT	51	18	+33
P627 PERFORM ABO GROUPINGS AND RH TYPINGS, INCLUDING DU	32	0	+32
G365 PERFORM POTASSIUM DETERMINATIONS	30	0	+30
P635 PERFORM CROSSMATCH CERTIFICATIONS	30	0	+30
P636 PERFORM CROSSMATCHING TESTS	30	0	+30
U836 PERFORM STAINING PROCEDURES SUCH AS GRAM'S STAIN OR METHYLENE BLUES	30	0	+30
F260 PROCESS SPECIMENS FROM OTHER LABORATORIES OR HOSPITALS	29	0	+29

TABLE 31

REPRESENTATIVE TASKS PERFORMED BY DAFSC 90492 PERSONNEL  
(N=11)

TASKS	PERCENT MEMBERS PERFORMING
A1 ADVISE SUPERIORS ON STATUS OF OPERATIONS	100
A5 COORDINATE ACTIVITIES WITH OTHER AGENCIES OR ORGANIZATIONS	91
A25 PLAN OR ESTABLISH LABORATORY ADMINISTRATIVE METHODS AND PROCEDURES	91
B42 COUNSEL SUBORDINATES	91
A8 COORDINATE WORK ORDERS OR REQUESTS WITH BASE CIVIL ENGINEERS OR HOSPITAL BUSINESS OFFICE	
A37 SCHEDULE LEAVES OR PASSES	91
B40 CONDUCT OR PARTICIPATE IN STAFF MEETINGS	91
C116 WRITE APRs	91
C87 EVALUATE ADMINISTRATIVE FORMS, FILES, OR PROCEDURES	91
A2 ANALYZE WORK LOAD REQUIREMENTS	91
B45 DIRECT MAINTENANCE OF ADMINISTRATIVE FILES	91
C114 REVIEW OR INDORSE AIRMAN PERFORMANCE REPORTS (APRs), SPECIAL AWARDS, OR PERSONNEL ACTIONS	82
B72 SERVE ON BOARDS OR COMMITTEES	82
B66 ORIENT NEWLY ASSIGNED PERSONNEL	82
B70 SCHEDULE OR POST DUTY ROSTERS	82
A16 ESTABLISH REQUIREMENTS FOR SPACE, PERSONNEL, EQUIPMENT, OR SUPPLIES	82
B44 DIRECT CRITIQUE PROGRAMS	82
B68 RESEARCH DIRECTIVES OR REFERENCE MATERIALS	82
A4 ASSIGN SPONSORS FOR NEW PERSONNEL	82
B56 IMPLEMENT GROUND SAFETY PROGRAMS OR PROCEDURES	82

TABLE 32

PERCENT TIME SPENT ON DUTIES BY AFS 909X0 DAFSC GROUPS

DUTIES	90930 (N=4)	90970 (N=15)	90999 (N=2)
<u>SUPERVISORY AND MANAGEMENT FUNCTIONS</u>			
A PLANNING AND ORGANIZING	2	7	17
B DIRECTING AND IMPLEMENTING	1	6	19
C EVALUATING AND INSPECTING	*	4	10
D TRAINING	0	2	2
<u>ADMINISTRATIVE FUNCTIONS</u>			
E PERFORMING ADMINISTRATIVE OR MATERIEL FUNCTIONS	7	15	34
<u>TECHNICAL FUNCTIONS</u>			
F PERFORMING GENERAL SERVICES, PROCEDURES OR MAINTENANCE FUNCTIONS	14	9	7
G PERFORMING CLINICAL CHEMISTRY PROCEDURES	2	*	0
H PERFORMING RADIOPHARMACEUTICAL KIT PREPARATION PROCEDURES	13	8	1
I SETTING UP SPECIALIZED RADIOGRAPHIC EQUIPMENT	0	*	0
J PERFORMING SEROLOGY PROCEDURES	0	0	0
K PERFORMING STANDARD (ROUTINE) RADIOGRAPHIC EXAMINATIONS	0	0	0
L PERFORMING PARASITOLOGICAL PROCEDURES	0	0	0
M PERFORMING OR PARTICIPATING IN SPECIAL RADIOGRAPHIC EXAMINATIONS	*	*	0
N PERFORMING URINALYSIS PROCEDURES	0	0	0
O PERFORMING ADVANCED RADIOGRAPHIC PROCEDURES	*	*	0
P PERFORMING BLOOD BANKING AND IMMUNOHEMATOLOGY PROCEDURES	0	*	0
Q PERFORMING IN VIVO ORGAN SCANNING AND RADIORENOGRAPHY PROCEDURES	47	35	8
R PERFORMING HEMATOLOGICAL PROCEDURES	0	*	0
S PERFORMING ULTRASONOGRAPHY PROCEDURES	0	0	0
T PERFORMING BEDSIDE, SURGICAL, OR FIELD RADIOGRAPHY	0	0	0
U PERFORMING BACTERIOLOGICAL PROCEDURES	0	0	0
V PERFORMING IN VITRO RADIOISOTOPE DIAGNOSTIC PROCEDURES	4	4	0
W PROCESSING RADIOGRAPHIC FILM	2	1	0
X PERFORMING CLINICAL MYCOLOGY, MYCOGACTERIA, AND VIROLOGY PROCEDURES	0	0	0
Y PERFORMING QUALITY CONTROL FUNCTIONS	*	*	0
Z PERFORMING RADIATION OR RADIOISOTOPE THERAPY	8	9	2

\* INDICATES LESS THAN ONE PERCENT

TABLE 33  
 REPRESENTATIVE TASKS PERFORMED BY DAFSC 90970 PERSONNEL  
 (N=15)

TASKS	PERCENT MEMBERS PERFORMING
Q686 PERFORM GALLIUM SCANS	100
Q676 INJECT RADIOACTIVE ISOTOPES	100
Q703 POSITION PATIENTS FOR GALLIUM SCANS	100
Q712 POSITION PATIENTS FOR THYROID ANATOMY IMAGE STUDIES	100
Q695 PERFORM THYROID ANATOMY IMAGE STUDIES	100
H413 CALCULATE REQUIRED DOSAGE OF RADIOACTIVE ISOTOPES	100
H415 PREPARE DOSING PHARMACEUTICALS FOR BONE SCANS	100
H416 PREPARE DOSING PHARMACEUTICALS FOR LIVER-SPLEEN SCANS	100
H412 CALCULATE RADIOACTIVITY OF TECHNETIUM GENERATOR PRODUCED ISOTOPES	100
H417 PREPARE DOSING PHARMACEUTICALS FOR OTHER IMAGING PROCEDURES	100
E210 SCHEDULE PATIENTS FOR EXAMINATIONS	100
F221 CLEAN LABORATORY FACILITIES OR IMMEDIATE WORK AREA	100
F217 ADVISE PHYSICIANS ON CAPABILITIES AND LIMITATIONS OF EQUIPMENT	93
A1 ADVISE SUPERIORS ON STATUS OF OPERATIONS	93
Z946 MONITOR RADIATION LEVELS OF RADIOACTIVE MATERIALS UPON RECEIPT	87
B41 CONDUCT RADIATION PROTECTION CHECKS	87
Z945 MEASURE ACCIDENTAL RADIOACTIVE CONTAMINATION	87

## COMPARISON OF AFR 39-1 SPECIALTY DESCRIPTIONS TO SURVEY DATA

The AFR 39-1 specialty descriptions for each career ladder in this study were compared to the survey data. These job descriptions are intended to give a broad overview of the major duties and responsibilities of a career specialty at the various skill levels, and not to provide detailed descriptions of specific jobs within the career ladder.

The specialty descriptions relating to AFS 903X0 all appear to be complete and accurately portray the duties and responsibilities of the personnel in this career ladder. All duties and responsibilities mentioned in the specialty descriptions could be matched to tasks in the job inventory, and sufficient numbers of survey respondents were found performing those functions to warrant their inclusion in the descriptions. However, reference to the operation of ultrasound equipment is found only in the 7-skill level description. Survey results indicated relatively the same percentage of 5-skill level airmen (six percent) performing this duty as were 7-skill level personnel. If this small percentage of airmen performing a duty is sufficient justification for inclusion of that duty into a job description, then some mention of the operation of ultrasonic equipment should be made in the 3-/5-skill level description. Otherwise it could be deleted, at least as a separate paragraph.

The AFS 90430/50, 90470, and 90492 specialty descriptions were also found to be complete and accurate displays of the duties and responsibilities of the career ladder. No major duties or responsibilities had been omitted nor were any trends noted in the career ladder structure that would necessitate a change in the specialty descriptions.

The AFS 90930/90970 specialty description is a very detailed and comprehensive description of the duties and responsibilities of Nuclear Medicine personnel. It is an accurate picture of the AFS 909X0 job description found in the survey results. The AFS 90999 specialty description was not compared to the survey results for two reasons. Only two 9-skill level airmen responded to the survey making objective judgments difficult with such a small data base. In addition, AFS 90970 personnel combine at the 9-skill level with AFS 90971 Neurology Technicians. Since survey questions regarding the supervision of neurology laboratory activities were not asked there was no way to access the accuracy of the specialty description in the neurology area.

## IMPLICATIONS

In the analysis of the survey data, it was found that the personnel assigned to each of the career specialties surveyed were performing jobs that were separate and distinct from one another. There was no overlap across career ladders of task performance in technical duties and functions. While there was considerable task overlap in the performance of supervisory duties, it is not until the 9-skill level that these duties become the major part of an incumbent's job. Seven skill level airmen, while performing these supervisory duties, remain essentially technicians. For this reason, it is probably not feasible to consider consolidation of any of these career ladders below the Senior Enlisted Manager level.